



Announcing IQ Central v1.8

Peek Traffic is pleased to announce the release of Version 1.8 of the IQ Central® Central-System Traffic Management Software. This release adds a system pattern monitor screen for all intersections, adds the ability to edit the 3000E preemption interval data, and corrects a number of bugs found in field testing. This update is recommended for all users of IQ Central, except those using the 3800EL master controller in their network. (Details on page 9.)

Product **IQ Central**
Version..... **1.8**
Release Date **January 12, 2008**

Product Requirements

This release of the software requires a Windows compatible computer, running Windows XP. For all features to work, the system must also have Microsoft Office, version 2000 or version 2003, installed and properly configured on the system.

Important Note: IQ Central is not yet supported on Windows Vista. IQ Central cannot currently be used with Office 2007.

To connect with field hardware, communications channels to those devices will also need to be available. Devices capable of using the NTCIP protocol natively, such as the Peek IQ-ATC and ASTC family of controllers, can be connected to IQ Central directly via one of these communications channels. Other, non-NTCIP compatible devices that will be connected to the software will need an additional piece of hardware; an IQ Connect® translator unit, installed somewhere near (or in the case of Peek 3000E controllers, within) the device.

If upgrading from a previous version of IQ Central, we recommend that you first make backup copies of the IQ Central database and associated files, and uninstall the earlier version of the application. For such system updates, additional conversion work on the earlier IQ Central database may need to be performed by a Peek Traffic technician prior to use. Please contact Peek Traffic Tech Support for additional information about upgrading IQ Central.

Contents

Product Requirements	1
Compatibility Matrix	2
Installation Notes	3
Before Installing IQ Central	
Version 1.8	3
Installation Steps	3
New Features	5
System Pattern Monitor	5
3000E Preemption Interval Editing ..	10
Issues Addressed in this Release.....	12
Additional Guidance on IQ Central	13
Documentation	13
Technical Support.....	13

Table 1 – IQ Central Version 1.8 Workstation Requirements

Minimum Workstation		Ideal Workstation or Server
Processor	Intel P4 or equivalent, or better	Intel P4 or equivalent, or better
Processor Clock speed	1.7 GHz	2.0 GHz
RAM	1 GB	1 GB
Free HD Space	5 GB	10 GB

Compatibility Matrix

This release of Version 1.8 of the IQ Central software will work with the following traffic-control products:

Table 2 – IQ Central Version 1.8 Compatibility Matrix

Device	Will work with IQ Central v1.8	Translator Firmware		Controller Firmware Required
		Part #	Version	
Traffic controllers and masters				
IQ ATC® Controller (NY CBD version)	Yes	N/A	None required ¹	01-00-0129
IQ ATC Controller (TS2 Type 2 version)	Yes	N/A	None required*	01-00-0129
Multisonics 820A OSAM Controller - Isolated Local	No	97-600	Not yet available	N/A
Multisonics OSAM-32 Master Controller	Yes	97-599	v2.1 or higher	v2.22
- 820A controller under an OSAM-32	Yes	N/A	Supported by the OSAM-32 translator	Rev K
Peek 3000E Controller - Isolated Local	Yes	97-602	v2.1 or higher	v3.6.2
Peek LMD 9200 Controller - Isolated Local	No	97-602	v2.1 or higher	v7.4.21
Peek M3000E Master Controller	Yes	97-601	v2.1 or higher	v2.8.2
- Peek 3000E controller under an M3000	Yes	97-602	Supported by M3000 translator	v3.6.2
- LMD40 controller under an M3000	No	N/A	Not yet available	N/A
- LMD8000/9200 controller under an M3000	No	97-602	v2.1 or higher	v7.4.20
Traconex TMM500 Master Controller	Yes	97-603	v2.1 or higher	C.0.B
- Traconex 390CJ controller under a TMM500	Yes	N/A	Supported by TMM500 translator	V.4.D
Traconex TMP 390 CJ Controller - Isolated Local	No	97-604	Not yet available	N/A
Transyt 3800EL Master Controller	Yes	97-605	v2.1 or higher	v17.4
- 1880EL controller under a 3800EL	Yes	N/A	Supported by 3800EL translator	92 R 09
Transyt 1880EL Controller - Isolated local	No	97-606	Not yet available	N/A
Wapiti 170 - Isolated local	No	97-608	Not yet available	N/A
Other types of devices				
Cohu NTCIP Camera	Yes	N/A	None required*	N/A
SSI Weather Station	Yes	N/A	None required*	N/A
Overhead Sign (NTCIP)	Yes	N/A	None required*	N/A
RTMS Sensor (NTCIP)	Yes	N/A	None required*	N/A

¹ Devices that speak NTCIP natively, such as the IQ ATC controller and NTCIP compatible signs and sensors, do not need separate translator hardware.

Installation Notes

IQ Central Version 1.8 should not be installed without the guidance of a Peek Traffic customer support representative. The following procedures describe the basic process to install or upgrade an IQ Central Version 1.8 system.

Before Installing IQ Central Version 1.8

1. If a previous version of IQ Central is installed on the computer, go to the Windows Control Panel and open Add/Remove Programs. Select IQ Central and choose Change. When the Change dialog box appears, choose Remove. *This will not delete the old database.*
2. Locate and back up the old IQ Central database. The file is called 'NTCIPServerDB.mdb'. (The simplest way to do this is to simply rename the file to **NTCIPServerDB-backup.mdb**, or something similar.) The current file may be stored on your C drive in the **Documents and Settings\All Users\Application Data\Peek Traffic\IQCentral** folder (for v1.7 and newer), in the **Documents and Settings\All Users\Application Data\Quixote Traffic\IQCentral** folder (for v1.6 and earlier versions of IQ Central), or it could have been stored where you installed IQ Central itself, or it could be installed somewhere completely different on your system, depending on how you installed IQ Central the previous time.



Note If your system is configured to use a Microsoft SQL Server database rather than the default Access database, you should be sure to backup and restore the SQL Server database using the normal database archival and restore tools of that environment.

3. On each system where IQ Central will be installed, verify that the operating system is at Windows XP. (IQ Central Version 1.8 is not compatible with Windows 2000 or Vista.)
4. Verify that a properly licensed version of either Microsoft Office 2000 or 2003 is installed on each system. (IQ Central Version 1.8 is not compatible with Office 2007.)
5. Locate the license key for IQ Central. This code should have been provided along with the installation CD. If not, contact your Peek Traffic service representative in order to request a valid license key.

Installation Steps

1. Insert the IQ Central installation CD into the CD-ROM drive of the workstation where you want to install the program.
2. If auto-run is not configured on this CD-ROM drive, open a Windows Explorer window and navigate to the drive. Locate the **Setup.exe** installation program and double-click it. This will launch the installation program.
3. Choose the **Install IQ Central** button.
4. Follow the directions on-screen. You will need to accept the software license in order to install the program. When you get to the Customer Information dialog box, enter the user name, organization, and your installation key in the fields. This key will determine whether the BMP or GIS mapping version of IQ Central is installed, as well as which optional modules are installed.
5. If you plan to install to the standard location on the hard drive (**C:\Program Files\Peek Traffic Corp\IQCentral**) then choose **Typical** on the next screen. On the other hand, if you wish to install the system somewhere else on your hard drives, choose Custom.

6. If you chose Custom, press the **Browse** button to select the install location for your IQ Central applications. In the tree view in this window, you also have the option to select whether you want the Help system, and the sample database to be installed with the program. Press **Next**.

Note: For **most** installations of the system, you should install the sample database. If you plan to retain data from a previous version of IQ Central, we do recommend that you install the sample database, and then contact Peek Traffic about restoring your existing data into the new database.

7. Complete the steps in the install until you reach the last screen, then choose the **Finish** button.
8. Restart the computer to complete the installation.
9. Repeat the process on each workstation for which you purchased a license. When installing to client workstations, be sure to select the Custom option and uncheck the "Alarm Server Component".
10. To configure multiple workstations to connect to a single 'IQ Central Server', some work will need to be done configuring the Windows Distributed Communications (DCOM) system. Unfortunately, this process is beyond the scope of this procedure. This process will be done by a Peek Traffic customer service technician.
11. Once the software is installed and the networked workstations are connected to one another, you will then need to configure the system to suit your needs. This process includes the following steps:
 - Installing the map files for your locale
 - Configure software 'Connections' that link to your physical communications channels
 - Installation of the translator hardware for those field devices that need them
 - Configuration of device instances within IQ Central to act as interfaces to your field devices
 - Assignment of Devices to Connections to complete the link between the central software and the field hardware
 - Placement of Device icons in the appropriate locations on the IQ Central versions of your local maps

New Features

Several new features have been added to IQ Central as part of the Version 1.8 update.

System Pattern Monitor

IQ Central, version 1.8 adds a new status window that displays the current coordination pattern of all intersections in the system.

Capabilities

With the new Pattern Monitor module, the operator can perform the following tasks:

- Poll all connected intersections for current pattern details.
- Sort the view by device or pattern description.
- Highlight all intersections in flash
- Highlight all intersections running Free
- Highlight all intersections running a selected intersection's pattern
- Highlight all intersections under manual control via police panel
- Highlight all intersections in preempt
- Highlight all intersections by pattern to illustrate system wide differences.
- Highlight all intersections in central override

The pattern monitor is designed to allow users to quickly spot intersections that are not running the expected pattern in a large system. The ability to highlight and sort the view allows a great deal of flexibility to find specific coordination related problems system wide.

Opening the Pattern Monitor Module

The Pattern Monitor module can be accessed in a couple of ways. It is included in the same window as the system alarm status as a second tab view. You can open it by going to the **Devices** menu, choosing **Intersections** and choosing **Pattern Monitor**.

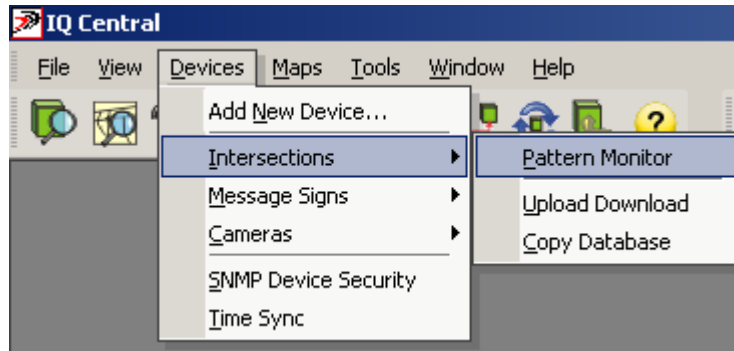


Figure 1 – Opening Pattern Monitor from the menus

Or the operator can access Pattern Monitor from the Alarm Status window by simply selecting the **Pattern** tab.

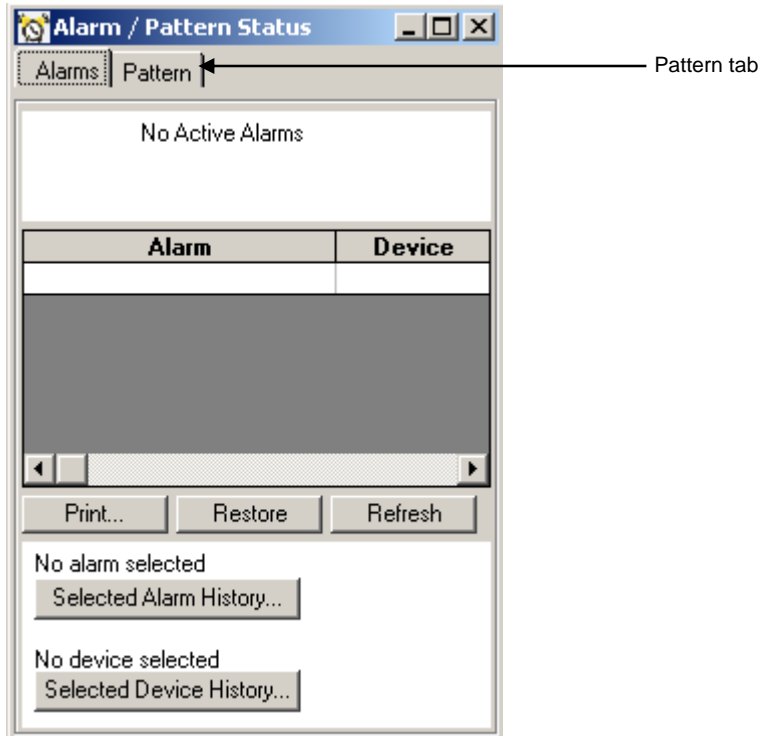


Figure 2 – Opening the Pattern Monitor from the Alarm Status window

When the Pattern Monitor opens, it will not automatically get the pattern from all devices unless configured to do so. Once the polling in the pattern monitor is configured and saved, opening the pattern monitor will automatically start polling for the desired information.

Using the Pattern Monitor Interface

The Time Sync module adds a new window to IQ Central with a fairly typical layout. It shows a list of all intersections in the system. The list can be sorted up and down by clicking on any of the column headers. At the bottom of the window are a set of controls used to poll the devices, highlight the list by pattern, and to configure the module.

The basic process to use the Pattern monitor module follows these three steps:

1. Open the pattern monitor.
2. Click the settings button to configure polling from this window.
3. Enable the polling to view the pattern.

Status	Intersection	Pattern
	IQASTC-1	[Pattern not requested]
	3ke-29	[Pattern not requested]
	m3k-3 3ke-1	Flash via central override
	m3k-3 3ke-2	C1/D3/S1 via central override
	m3k-3 3ke-3	C1/D3/S1 via central override
	m3k-3 3ke-4	C1/D3/S1 via central override
	m3k-3 3ke-5	C1/D3/S1 via central override
	m3k-3 3ke-6	C1/D3/S1 via central override
	3800EL-1 1880EL-1	[Pattern not requested]
	3800EL-1 1880EL-2	[Pattern not requested]
	TMM500-2 390CJ-1	[Pattern not requested]
	TMM500-2 390CJ-2	[Pattern not requested]
	TMM500-2 390CJ-3	[Pattern not requested]
	TMM500-2 390CJ-4	[Pattern not requested]
	OSAM-7 820A-1	

Polling On | Polling m3k-3 3ke-3

Figure 3 – Pattern Monitor window

The first column represents the connection and its status. The icon is green when connected, red when not. The second column shows the intersection name. The third column shows the pattern description. If the pattern has not yet been requested, it will list just that as in the figure above.






The list can be sorted by clicking any of the column headers. A second click on the same column header will reverse the sort based on that column.

The Status column shows the current connection status for each device. Devices are indicated with either a dial-up or direct connection icon, and each of these can either indicate that the connection channel is open or closed.



Note An ‘open connection channel’ does not necessarily indicate that IQ Central is able to communicate with the device. It only indicates that the Windows communications channel assigned to that device has been successfully opened. You can tell if a device channel is actually working by attempting to retrieve time information from the device.

Table 3 – Device Status icons

Icon	Meaning
	A device with a dial-up Connection, showing that the channel has been successfully opened
	A device with a dial-up Connection, but the channel hasn't been opened yet, or cannot be opened. This could be caused by a failure to find a modem, or an improperly configured serial port.
	A device that is currently dialing to make a connection
	A direct Connection channel that has not been, or could not be, opened. This could be an Ethernet channel or a direct serial channel.
	A direct Connection channel that has been successfully opened.

The Pattern Monitor toolbar, located at the bottom of the Pattern Monitor window and shown below, is the primary control for this interface. It's main purpose is to allow the operator to turn pattern polling on and off, highlight the patterns in the list and modify the settings.

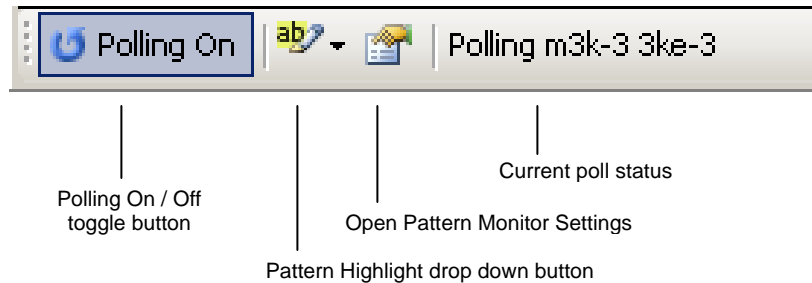


Figure 4 – Pattern Monitor toolbar

The Polling On / Polling Off toggle button is used to start and stop polling from this window. This is a state button, so clicking it once will start the polling. This will continue until the user clicks the button again, at which point the polling will stop. The Pattern Monitor will only poll devices that are connected. This is of particular interest to users with dialup systems. You must manually establish the dialup connection for the devices on that connection to be polled. This can be done via the context menu (Right-Click) on the dialup device in the list.

The Highlight button is a drop down list of highlighting options. Selecting one of the options will cause all device rows running a matching pattern to be highlighted with a different background color. The table below lists all of the options available in this list.

Table 4 – Highlight options

Menu Item	Description
No Highlights	No rows are highlighted
Selected Pattern	All rows for intersections running the same pattern as the currently selected row will be highlighted
Flash	All rows for intersections in flash will be highlighted
Free	All rows for intersections running Free will be highlighted
MCE	All rows for intersections currently under manual control will be highlighted
Preempt	All rows for intersections in preempt will be highlighted
Central Override	All rows for intersections currently in central override will be highlighted
Differences	Each unique running pattern in the system will be assigned a highlight color. This allows a quick spotting of intersections not running the expected pattern for a specific time of day.

The Pattern Monitor Settings button will open the settings dialog for the Pattern Monitor window. Here you can adjust the polling settings as shown in **Figure 5**.

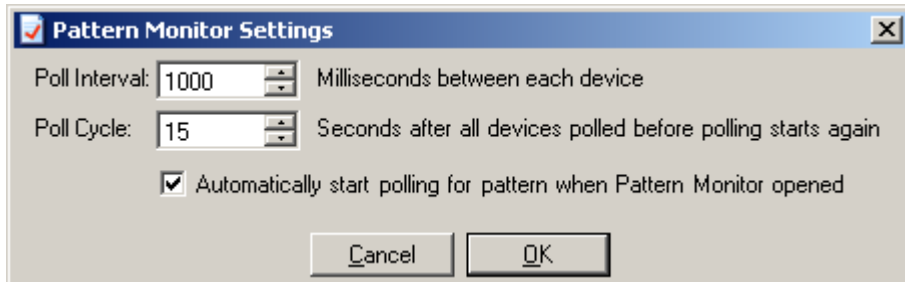


Figure 5 – Pattern Monitor Settings window

The **Poll Interval** setting allows you to specify the time interval between polling each device. For Closed Loop master based systems a 1000 millisecond interval is recommended. For direct connected isolated local based systems, this can be set much smaller (100 milliseconds or so).

The **Poll Cycle** setting allows you to specify the number of seconds to wait before starting the poll of all intersections again.

The **Auto Start...** setting allows you to tell the Pattern Monitor to automatically start polling when the window is opened.. If this is not checked, then you will need to click the Polling On button on the Pattern Monitor toolbar to start retrieving pattern data.

	<p>Warning For EI system users (1880EI controllers under 3800EI masters) the patterns reported are incorrect with the current version of 3800EL translator firmware for IQ Connect as of the date of this release. If this applies to you, contact Peek to get an update to the translator firmware that will fix this problem and work correctly with the Pattern Monitor.</p>
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3000E Preemption Interval Editing

This addition only applies to users of the Peek 3000E controller interface. The editing of the preemption intervals is now fully supported in the upload / download forms. This data is available as the seventh tab in the Preemption group as shown below.

Field Name	Units	1	2	3	4	5	6	7	8	9	10	11	12
Intervals 1-12	Preempt	Run 1 Int 1	Run 1 Int 2	Run 1 Int 3	Run 1 Int 4	Run 1 Int 5	Run 1 Int 6	Run 2 Int 1	Run 2 Int 2	Run 2 Int 3	Run 2 Int 4	Run 2 Int 5	Run 2 Int 6
Intervals 13-24	Preempt	Run 3 Int 1	Run 3 Int 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Intervals 25-36	Preempt	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Intervals 37-48	Preempt	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Intervals 49-60	Preempt	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Intervals 61-72	Preempt	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Figure 6 – The preemption run intervals page for the 3000E.

Each interval lists the run and interval position that it is assigned. This allocation is determined by the **Max Intervals** value assigned to each run on its own tab. The above screenshot shows that Run 1 has Max Intervals set to 6, Run 2 has Max Intervals set to 5 and Run 3 has Max Intervals set to 2.

Field Name	Units	Value
Run Enable	Y/N	No
Railroad	Y/N	No
PE Input Lock	Y/N	Yes
Early PE Out	Y/N	No
Max Intervals	0-32	6
Override Flash	Y/N	Max Intervals : Value
Go to Higher PE	Y/N	Yes
NEMA Priority	Y/N	Yes
Hold Only	Y/N	No
User Priority	1-6	Priority 1
Double Clear Overlap Enable	Y/N	No

Figure 7 – Max Intervals value for Run 1

The editing of the interval data can be done by double clicking the cell for that interval. This will open a dialog with all of the interval data for that interval. If you double click a cell that shows N/A indicating the slot is not allocated, no edit dialog will appear. There are three tabs to allow editing of the phases, overlaps and preempt outputs plus other parameters.

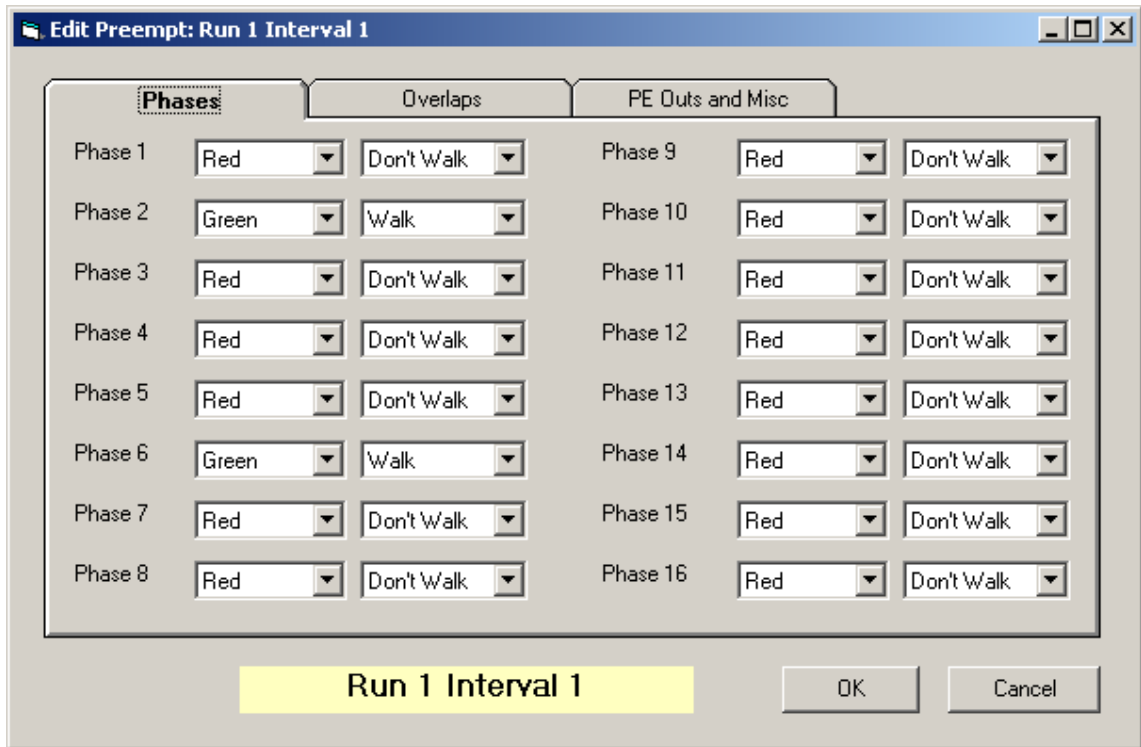


Figure 8 – The preempt interval editor

Issues Addressed in this Release

The following issues and reported problems with previous versions of IQ Central have been addressed and repaired in IQ Central Version 1.8

Table 5 – The Version 1.8 release of IQ Central addresses the following issues

Issue	Resolution	Case #
EL week plan database retrieved values showed up in the incorrect order.	This has been corrected.	4071
Enhancement request: Add a system wide pattern status window	This has been added via the new Pattern Monitor module.	4102
3000E TOD Day Plan editing: The day plan entries do not get sorted.	Now the day plan entries get sorted after any editing is done. This ensures that they get sent to the field controller in a form that the controller can run.	4106
3000E Preemption Run intervals cannot be edited.	The 3000E preemption interval data has been added to the upload / download forms.	4107
Alarms toolbar missing from the Tools > Toolbars listing	The Alarms toolbar has been added to the list, allowing the user to show / hide this toolbar.	4182
1880 EL forms: Coordination > Closed Loop value options were not defined.	This editor now lists the options as a readable list instead of a numeric value entry.	4194
1880 EI forms: Special > Exclusive Ped Control value options were not defined	This editor now lists the options as a readable list instead of a numeric value entry.	4195
3000E forms: COSF to TOD. Editing the 5 th circuit corrupted other values.	This has been corrected to allow all data entry.	4254
Deleting a device with alarms assigned to it directly caused the alarm editor to generate an error when subsequently opened.	The alarm table now gets properly updated when a device is deleted.	4259
Archive and Restore: The alarms were not being restored.	This table now gets property restored.	4262
3000E TOD Database Print: The day plan event details were not getting printed	The details of the TOD day plan entries are now included in the print.	4282
Video connection Editing: Errors were generated when this dialog is opened with no cameras configured in the system.	The dialog no longer generates errors under these circumstances.	4316
Database copy: Error was generated when no pages were selected.	This has been corrected so that no errors are generated in this situation.	4335

Additional Guidance on IQ Central

The following additional resources are available for all customers should you have the need for extra guidance concerning the IQ Central software and its use with a variety of hardware.

Documentation

Table 6 — Additional documentation available for IQ Central and related hardware

Document	Part Number
IQ Central Release Notes	99-427
IQ Central Help System	<i>Included with product</i>
IQ Central Operating Manual	81-1123
Quixote IQ ATC CBD Controller Manual	81-1164
Quixote IQ ATC TS2/2 Controller Manual	81-1190
Peek 3000E Controller Operating Manual	8204C
Peek 3000E Firmware Release Notes	99-332
Peek LMD 9200 Operating Manual	060758
Peek M3000E Master Controller Operating Manual	5928
Peek M3000E Master Firmware Release Notes	99-329
Multisonics 820A OSAM Controller Operating Manual	006922
Multisonics OSAM 32 Master Controller Operating Manual	RM-0891
Traconex TMM500 Master Operating Manual	28027317-001
Traconex 390CJ Controller Operating Manual	MN078056
Transyt 3800EL Master Controller Operating Manual	81-1191
Transyt 1800EL Controller Operating Manual	81-1192

Technical Support

This contact information will connect you with the IQ software technical support staff of Peek Traffic Corporation, should you require additional help concerning this update.

Peek Traffic Corporation

Software Technical Support

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